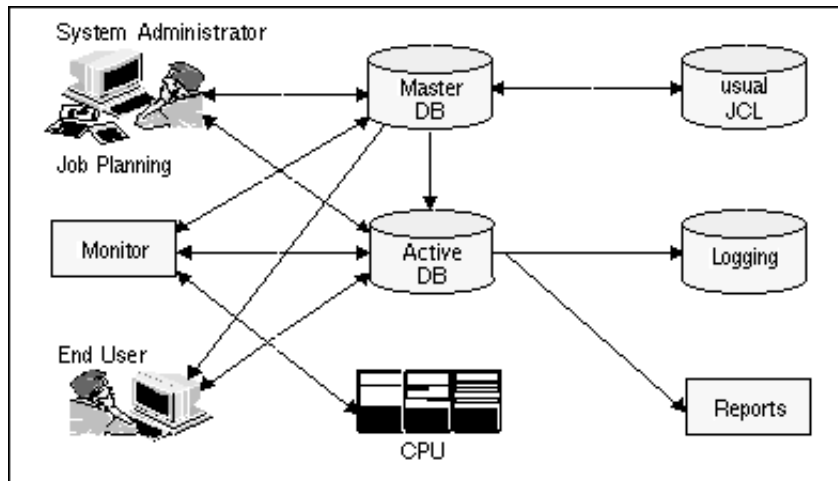


Entire Operations Components

Entire Operations consists of the following components:



- Master Database
- External JCL
- Active Database
- Monitor
- Operating System
- User Interface
- Logging Facility
- Reporting Facility
- Editor

Master Database

All definitions and information concerning any user, job network, job, and scheduling information are stored on the master database. The master database is an Adabas file. This automatically provides features such as user synchronization, data integrity, data compression, auto-extension and auto-restart capability. The stored objects can be maintained online in any environment such as Com-plete, CICS, IMS, TSO, TIAM and UTM as well as on UNIX. These objects are:

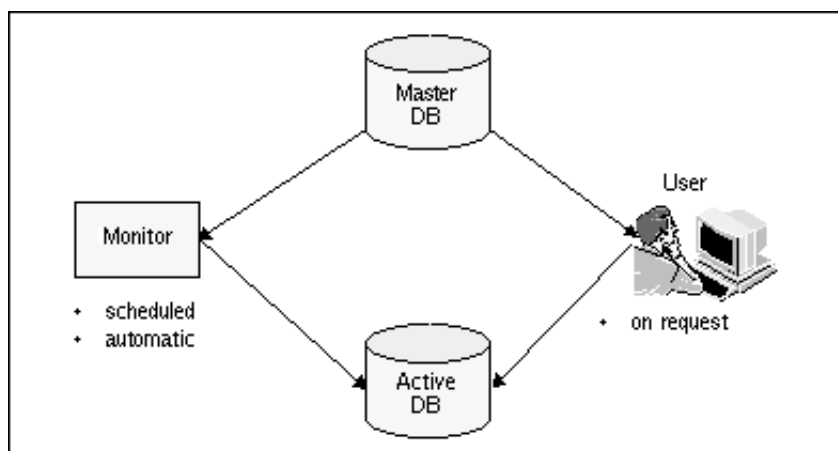
- User profiles;
- Job network definitions;
- Job definitions;
- Input and output conditions;
- Resource definitions;
- Schedule tables;
- Calendars;
- Symbol tables.

External JCL

Entire Operations can integrate JCL unchanged into job networks and the JCL can even remain in its original location. Sequential data sets and PDS, LMS and VSE/ESA libraries are supported as well as the Natural and CA-LIBRARIAN storage types. On the UNIX operating system, any number of shell scripts can be included into job control by Entire Operations.

The IMPORT function allows you to copy the JCL to the Master Database. This should always be used when required by particular backup criteria (access is then only possible through Natural Security) or if the JCL resides in the Master Database and is backed up with it.

Active Database



When a job network is activated, it is copied to the active database. A network is activated either automatically by the Entire Operations Monitor according to its scheduled date, or manually by the user on demand. The active database may thus contain several copies of the same job network, each identified by a different run number.

The following information is stored:

- Current definition of scheduled job networks and their current symbol tables;
- Active JCL library
(this means that all JCL information is copied from external storage media such as PDS, LMS, VSE-LIBRARIAN or UNIX files to the active database)
- Current status of input and output conditions;
- Current job status.

The active database can be accessed and its information modified in the same way as the master database. Changes to any object in the active database are only valid for the current run of the network and do not affect the network and job definitions stored on the master database. This enables you to make modifications which are valid only for a specific production cycle.

Monitor

The Monitor is the heart of Entire Operations. The Monitor is a complex program that 'wakes up' periodically and checks the definitions stored in the master database for any work to do. It activates and processes networks and jobs according to their prerequisites and controls running job networks, even if they reside on the nodes of different computers.

The Monitor performs the following functions:

- Automatically activates scheduled networks (copies them to the active database);
- Checks time windows for job or job network execution;
- Checks input conditions and resources;
- Submits jobs according to their (internal) priority;
- Keeps track of jobs in the various queues of the operating system;
- Analyses end-of-job status, determines which events have occurred and triggers appropriate system actions (set logical conditions, send messages, start programs);
- Logs all important information.

The functions of the Entire Operations Monitor can be distributed to various subfunctions (subtasks). Using subtasking, certain processing steps can run in parallel and multi-processor environments can thus be used to optimize performance. Distributing typical Monitor functions is the responsibility of the System Administrator.

Operating System

Entire Operations initiates CPU-based processing on the underlying operating system: jobs, tasks, scripts or Natural programs are started. The Monitor sends the appropriate requests to the Entire System Server execution node and with Entire Net-Work can do this across the whole network.

User Interface

Entire Operations contains a menu-driven, easy-to-use user interface, which allows each user to perform all necessary functions according to his authorization profile. The system was designed so that all users would find it comfortable to work with.

This subsection covers the following topics:

- Entire Operations User Interface
- Uniform Screen Layout
- Line Commands
- Direct Commands
- PF Keys
- Window Technique
- Entire Operations Online Help Facility
- English and German
- Color Support

The following figure illustrates a typical Entire Operations screen - the Job Maintenance screen in the Network and Job Maintenance facility:

Entire Operations User Interface

20.11.01				*** ENTIRE OPERATIONS ***				11:39:41			
Owner EXAMPLE				Job Maintenance				Network B60-FLOW			

Cmd	C	R	PU	Job	Type	Description	File or Library		Member		
				*-----							
—				JOB-01	MAC	Where it all starts .	EOR-T210		B60-M02		
—	C1	P		JOB-012	MAC	Depending on Job-01 .	EOR-T210		E57-M01		
—	C1			JOB-013	MAC	Depending on JOB-012	EOR-T210		E57-M01		
—	C1			JOB-014	MAC	Depending on JOB-013	EOR-T210		E57-M01		
—	C1			JOB-015	DUM	Depending on JOB-014					
—	C1			JOB-019	MAC	Depending on JOB-01	EOR-T210		E57-M01		
—	C2			JOB-02	MAC	Dep. JOB-15, JOB-19	EOR-T210		E57-M02		
—	C1			JOB-03	NAT	Depending on JOB-02	EOR-T210		E57-P01		
—	C1			JOB-04	MAC	Depending on JOB-03	EOR-T210		E57-M01		
—	C1			JOB-05	DUM	Depending on JOB-04					
—	C1			JOB-06	MAC	Where it all ends	EOR-T210		E57-M02		

***** Bottom of Data *****											
A Depend. C Copy D Delete E Edit G Pregen. I Input Cond. L Resources											
M Modify O EOJ Chk + Act P Prose R Activate S Scheduling Parms U Add.Log											
Command => _____											
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---											
Help		Add		End		Save		Up		Down	
										Menu	

Uniform Screen Layout

All Entire Operations screens have the same structure that includes:

- a **headings section** identifying the session and current function;
- a **main information section** beginning with a line command input field;
- lines containing descriptions of available **line commands**;
- a **command line** for direct access to a specific system function;
- **PF-key line** describing the functions assigned to PF keys.

Line Commands

A line command is entered in the first field of a line containing data on an Entire Operations system screen and allows the user to perform a certain function on the selected item. Each screen contains a description of all available line commands;

Direct Commands

A direct command is entered in the **Command =>** line at the bottom of each system screen and allows the user to bypass the menu-driven mode of work. Any Entire Operations screen can be accessed by entering a single direct command. Direct commands have priority over line commands and PF-key functions;

PF Keys

Certain maintenance, navigational and scrolling functions are assigned to PF keys. Each Entire Operations screen displays PF keys with a description of the assigned function.

Window Technique

20.11.01	*** ENTIRE OPERATIONS ***		15:27:38
Owner EXAMPLE	Input Conditions Maintenance		Job JOB-02
Network	+-----+-----+-----+-----+		
----- !			! -----
C Condi !	Master Input Condition Addition		! er Rtn
_ E60-J !			!
_ E60-J !	Owner ==> EXAMPLE__		!
_ !	Network ==> E60-FLOW__		!
_ !	Condition ==> GHH-1_____	Run ==> _____	!
_ !	Reference ==> _____		!
_ !	+-----+-----+-----+-----+		!
_ !	Usage (!		! !
_ !	Must !	Input Condition User Routine	! : _ !
_ !	! !		! !
_ !	Dependi !	Condition ==> GHH-1	! !
***** !	User !	Run ==>	! > _ ! *****
D Delet !	File !		! > _ !
! !	User !	Value will be determined by	! > _ !
! !	Job V !	NATURAL Library ==> _____	! !
Command !	! !	User Routine ==> _____	! !
! -PF1---P !			! 2-- !
Enter-PF !	Help A !	PF1 Help PF3 End	PF9 Delete ! u ! F12---
He +-----+-----+-----+-----+	+-----+-----+-----+-----+ enu		

Entire Operations uses the concept of windows to make it easy for the user to define and maintain system objects or to select objects from availability lists;

Entire Operations Online Help Facility

Entire Operations provides comprehensive online help which enables you to display explanatory texts for an **individual field** or for the **whole screen**.

The hierarchy of the help screens reflects the hierarchy of Entire Operations system screens. This means that you can invoke the online help facility from any system screen and you immediately see the help text defined for that screen. You can then return to the system screen or ask for more help.

Alternatively, you can enter the online help facility at the top end of the hierarchy by selecting the **Help** option on the Main Menu. This displays the main Help Menu with a list of selectable items and a short explanation of their meaning:

```

20.11.01          ENTIRE OPERATIONS HELP          15:22:15
----- Table of contents -----
Option ==>                      H00000

      E N T I R E   O P E R A T I O N S   H E L P

Please select one of the following items to get detailed information:

1  Help about Help   - The ENTIRE OPERATIONS Help System
2  The Maps          - Functionality of ENTIRE OPERATIONS Maps
3  Networks and Jobs - Maintenance of Networks and Jobs
4  Calendars         - Definition and usage of Calendars
5  Active Queue      - Display and modification of Active Jobs
6  Symbol Tables     - Symbol table editing
7  Logging           - Selection and display of Log Information
8  Dynamic JCL       - How to work with dynamic JCL
9  System            - System Administrator Utilities
10 Active Conditions - Maintenance of Active Conditions
11 Editor            - The ENTIRE OPERATIONS Editor
12 Reports           - ENTIRE OPERATIONS Reporting Facility
13 Direct Commands   - How to use the Command Line
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
Quit End

```

English and German

Entire Operations is available in English and German, including the whole user interface with maps, help information and error messages.

Color Support

Colors are extensively used to distinguish important information, warnings etc. from other information.

Logging Facility

Entire Operations provides a logging facility which records every event during network processing. It also records all manual changes to active jobs, such as JCL corrections or updates of symbol tables. This information is available online and can be used for reporting and statistical purposes.

The log information can be selected according to job network and job, as well as according to dates and times, or even users. The log reports can also be exported into a sequential file, thus providing the opportunity for further analysis with any other tool and according to any criteria.

It is possible to define logging of JCL, job protocol and/or job-related messages for all or for some jobs.

Reporting Facility

A reporting facility provides a wide range of system information useful for keeping track of operations, for making scheduling decisions or even for planning future production cycles.

Reports are available on the basis of log information. They can be requested for all jobs or selected for a given date/time range, either for all terminated jobs or for abended jobs.

Descriptions of job networks are available in a brief outline and more detailed form.

A list of all jobs scheduled for a specific date can also be displayed. This makes it possible to forecast any future production date in advance.

All reports can be viewed online or printed for archiving purposes.

Editor

Entire Operations includes an adapted version of the Software AG Editor which can be used to create, display or modify any of the following:

- JCL in the master database, either in an external file or Natural member;
- JCL in the active database;
- Natural programs and user routines;
- Online documentation of networks, jobs and any events (e.g. scratch pad information);
- Job protocols and output (in browse mode).

Entire Operations Editor - Job Description

```

Edit Prose Jb: ABC3A Nw: EORACCT----- Columns 001 072
====>                                     SCROLL==> CSR
***** ***** top of data *****
00001 Job 'ABC3A'
00002 -----
00003 This job forces a defined event at end-of-job time and executes the
00004 program 'EORCONTI' which resides on the installation library
00005 'EORnnn.LOAD'. The necessary JCL which is named 'EORE*' is stored in
00006 the installation library 'EORnnn.SRCE'.
***** ***** bottom of data *****

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help      End      Rfind Rchan Up      Down Impo Left Right Curso

```

The Entire Operations Editor allows you to handle all these data types in the same way in any operating system and run-time environment supported.